

Chapter 13

RADIOLOGY SERVICES

13.1. Radiology Services in INS Service Processing Centers (SPCs). Radiology services are provided on-site in INS SPCs via INS/DIHS owned equipment or Radiology Service Providers (RSP). RSPs utilizing digital equipment are known as Teleradiology Service Providers (T-RSP) and those utilizing traditional film are known as Film Radiology Service Providers (F-RSP). A contractual agreement arranged through DIHS Headquarters defines the services provided, the billable fees and fee schedules, time allowed for reporting, types of reports required, and all other aspects of radiology services. Services provided shall be designed to meet the needs of patients in accordance with professional practices and legal requirements. When the needs of the patient extend beyond that which can be provided on-site by the RSP, patients are transported to a network hospital/health care facility that provides the services.

13.2. Staffing. F-RSPs are responsible for providing appropriately trained staff to perform radiographic studies on site and transporting the films to a location where a board certified radiologist interprets the film. T-RSPs are responsible for providing on-site training for DIHS staff that will perform digitized chest screening radiographic studies. Digitized images are transmitted via secure data transmission lines or devices to the University of Maryland where they are interpreted by board certified radiologists. Although certified radiology technicians or technologists may be contracted to perform difficult or non-routine radiographic studies, in most cases, DIHS health care providers will be trained to operate the digitized radiography systems and perform chest screening studies. For sites where INS/DIHS owned equipment is used, certified radiology technicians or technologists or appropriately trained DIHS staff perform the radiographic studies.

13.2.1. DIHS Staff. Certain DIHS staff may perform chest x-rays and/or other radiographic studies using an automated digital system if they are: a licensed physician, dentist, nurse practitioner, physician assistant, registered nurse, licensed vocational nurse, or licensed practical nurse. All such providers are expected to perform digitized chest x-rays as determined by program needs. For radiographic studies other than chest x-rays, only a physician, certified radiology technician, or fully trained competent staff member may perform these services.

13.2.2. DIHS Physicians. DIHS physicians may perform “wet reads” on film studies or on digitized images if the image is then over-read by a board certified radiologist.

13.2.3. Radiology Services Supervisor. The CD at each SPC will serve as Radiology Supervisor for that site. As supervisor, the CD renders administrative decisions, provides consultation concerning the medical significance of results, and assists in obtaining other professional consultation with the National Director of Radiology if needed.

13.3. Organization of Radiology Services. The Director of the DIHS, in consultation with the Medical Director, determines the scope of radiographic services to be provided in INS SPCs. Clinical Directors serve as Radiology Services Supervisors at each site and are supervised by the Medical Director. Radiology expertise is provided through a contractual arrangement with a board certified radiologist who serves as the National Director of Radiology.

All staff members performing radiographic functions are supervised in these functions by the National Director of Radiology. The National Director of Radiology provides the following services to DIHS:

- XExpert guidance to the Medical Director concerning programmatic issues
- XGuidance on an individual basis to local Radiology Services Supervisors on specific patient diagnosis/management issues
- XInterpretation of dosimeter monitors

13.4. Training, Competency, and Continuing Professional Education. DIHS staff members who perform radiographic studies using an automated digital system and Clinical Directors shall be trained and determined to be competent in the techniques and safety measures specific to the equipment used. Initial training and competency evaluation shall be provided, under contractual arrangement, by the T-RSP in a “train the trainer” format. DIHS trainers will then train other staff members. Competency will be tested annually thereafter for each provider that performs radiographic studies. Competency is determined by the Clinical Director in consultation with the T-RSP radiologist and is based on the adequacy of technique as demonstrated by a low rate of retakes. The HSA, in consultation with the Clinical Director of each SPC is responsible for identifying providers to be trained, arranging for the training, and maintaining records of training and competency evaluations.

13.4.1. Training Agenda. Training provided by the T-RSP will follow an agenda that has been approved by the American Board of Radiology.

13.4.2. Annual Training/Competency. Trainers at each site will receive annual refresher training (program directed) from the T-RSP at which time their competency will be re-established. Trainers will then assist the CD in re-establishing the competency of all DIHS staff members who perform digitized radiography studies.

13.4.3. Case Studies. A record of unusual and interesting cases shall be maintained for educational purposes.

13.5. Local Operating Procedures. Written local operating procedures shall cover at least:

- XIdentification of the current radiology services supervisor,
- XScheduling,
- XA list of examinations performed on-site,
- XInfection control procedures,
- XHandling of isolation patients,
- XHandling of emergency patients,
- XCare of the critically ill,
- XPreventive maintenance,
- XRadiation safety,
- XSafety precautions,
- XDisaster plans,
- XEducation program,
- XRequired records and reports,
- XPreparation of patients,

- XCalibration and safe use of equipment,
- XInspection of x-ray safety equipment for defects,
- XRadiation exposure precautions,
- XLocal precious metal recovery vendor information.

13.6. Records of Radiographic Exposure. Records of exposure shall be maintained for all radiographic studies performed in INS SPCs.

13.6.1. Teleradiology Logs. For sites that use teleradiology, the teleradiology service provider shall maintain a daily x-ray log in digital format. It is the responsibility of the service provider to train on-site operators on the methods of data entry for this log. The log shall contain, at a minimum:

- XPatient name
- XPatient Alien number (A#)
- XType of study
- XNumber of exposures
- XProvider Identification Number (PIN) of person performing the study (if DIHS staff) or provider name if study is performed by a contracted provider
- XX-ray exposure technique
- XDate film was exposed
- XDate film was transmitted
- XDate report was returned

13.6.2. Film Radiography Logs. For sites that use film radiology via a Film Radiology Service Provider, a bound ledger shall be established in the x-ray department. The log shall contain, at a minimum:

- XPatient name
- XPatient Alien number (A#)
- XType of study
- XNumber of exposures
- XName of person performing the study
- XX-ray exposure technique
- XDate film was exposed
- XDate report was returned

13.7. Patient Privacy. All possible efforts shall be made to ensure patient privacy at all times during radiographic procedures, particularly for undressing and dressing, during the procedure, and waiting in the department. Paper gowns shall be provided when it is necessary for a patient to disrobe. A private area, in accordance with detention standards, shall be provided for undressing.

13.8. Ordering Radiographic Examinations. For INS Service Processing Center Medical Facilities where T-RSPs provide service, screening chest x-rays are to be completed on all detainees (except juveniles under age two) entering the facility if it is likely the detainee will remain in the facility for more than 24 hours.

In facilities with T-RSPs, it is the goal of the Division to have only detainees with chest x-rays that are negative for TB placed in general population. All other x-rays require an order by a medical provider (MD/DO/NP/PA).

For INS Service Processing Center medical facilities where F-RSPs provide service, chest x-rays will be performed on detainees with a +PPD, signs and symptoms of TB or a prior history of TB. See TB Treatment, Evaluation, and Control in the DIHS Infection Control Manual. All other x-rays require an order by a medical provider (MD/DO/NP/PA).

13.9. Evaluation/Interpretation of Radiographic Film. Evaluation of all radiographic images whether digital or film shall be performed by a board certified radiologist.

13.9.1. TB Screening Requests. For TB screening by T-RSPs all images will be transmitted, as soon as possible, to the University of Maryland, Radiology Department for interpretation. The results of the screening will be reported to the requesting facility within four hours, per terms of the contract agreement.

13.9.2. STAT Requests. The Clinical Director shall review all reports resulting from STAT requests on the same date as ordered.

13.9.3. Routine Requests. All reports resulting from routine requests (other than TB screening) shall be performed and reviewed by the ordering clinician within 48 hours.

13.10. Distribution of Reports. Authenticated, dated reports of all radiographic examinations performed shall be part of the detainee medical record. Radiographic reports shall be reviewed by the CD or designee within two working days, dated, and initialed prior to distribution and filing in the patient medical record. The reviewing CD or designee is responsible for appropriate and timely follow-up actions on all abnormal findings on radiographic reports and that any actions taken are documented on Standard Form 600 in the detainee medical record. The original copy of the completed report shall be filed in the detainee medical record per filing guidelines, see Health Information Chapter.

13.11. Archiving and Retrieval of Digital Radiographic Image Files. Radiographic image files of persons detained by the INS shall be maintained for a minimum of three years as defined by the United States Department of Justice (DOJ). The teleradiology service provider is responsible for maintaining an archive of the images in a format that can be retrieved upon request.

13.12. Filing of Radiographic Film. For INS SPCs that maintain radiographs on site, a log will be maintained of all x-rays taken. Radiographic images will be filed in numeric order by Alien number.

13.13. Radiation Safety. Staff, RSPs, and preventive maintenance personnel shall implement proper safety precautions against electrical and mechanical hazards, radiation exposure, fire, and explosion. Appropriate safety equipment shall be used for all examinations. Lead gloves, aprons, and gonad shields shall be inspected at least twice a year for defects.

See SOP for procedure for radiation shield inspection. The films shall be sent to the radiologist for interpretation. Documentation must include a signed report from the radiologist.

13.13.1. Film Radiology. Precautions shall be taken to minimize radiation exposure through appropriate shielding. The F-RSP performing portable x-ray procedures, as well as anyone assisting, shall wear a lead apron. Lead gloves shall be provided if manual support of position for x-ray is necessary. All unnecessary personnel shall be removed from the immediate area, and the person performing the procedure shall stand as far away as possible from the x-ray tube when making an exposure. Proper shielding of radiation sources shall be maintained. The F-RSP is responsible for periodic inspection and evaluation of portable radiation sources, including calibration of equipment; and shall comply with Federal, State, and local laws and regulations.

13.13.2. Teleradiology. The T-RSP is responsible for providing training of DIHS personnel who will in turn provide training for other DIHS staff on the safety procedures of the digital radiography equipment. This includes the wearing of proper shielding, shielding the patient, positioning of operator during x-ray exposure, shielding of radiation sources, and monitoring the calibration of equipment to comply with Federal, State, and local laws and regulations.

13.14. Radiation Monitoring. All personnel who use radiological equipment shall wear a film badge while on duty to monitor cumulative radiation exposure. Individuals shall ensure that their badges are not subjected to unnecessary exposure or left in the x-ray room. Quarterly reports of cumulative exposure shall be maintained by the HSA and reviewed and initialed by the National Director of Radiology. All reports of high exposure or overexposure shall be investigated to determine the cause. FDA recommendations shall be followed. A copy of the reports of high exposure or overexposure and the investigation shall be forwarded to the National Performance Improvement Committee, the Medical Director, and the Telehealth Coordinator.

13.15. Infection Control. Proper infection control practices shall be performed in accordance with the DIHS Infection Control Manual. Infection control procedures shall be followed after each patient contact with a machine surface. This entails wiping the surface with an approved cleaning solution (check manufacturer's recommendations). The x-ray tabletop must be wiped down with a disinfectant solution after each patient use.

13.16. FDA Radiation Survey. The FDA conducts surveys of radiographic equipment (radiation sources) at INS SPCs every two years.

13.16.1. INS/DIHS owned equipment. For INS/DIHS owned equipment, the HSA shall ensure that the surveys are accomplished according to schedule. The HSA shall maintain a copy of reports, take any corrective actions that are needed and prepare responses. The responses will be submitted to the Office of the Director, which will, in turn, submit them to the appropriate authorities.

13.16.2. Teleradiology Service Provider owned equipment. When the equipment is owned by a T-RSP and is installed in an INS SPC, the T-RSP is responsible for arranging and funding FDA Inspections. In this case, the HSA is the DIHS liaison that monitors inspection schedules to ensure that required inspections are performed and a safe environment of care is maintained.

If the T-RSP fails to arrange the required FDA inspections on schedule, the HSA shall inform the DIHS Telehealth Coordinator who will, in turn, inform the contract officer. Documentation of FDA Inspections on radiation sources installed within INS SPCs shall be provided to the HSA by the T-RSP.

13.17. Use of X-ray for Body Searches. Use of radiography for body searches is not authorized in INS SPC health care facilities. If the need for a body search is identified, it is the responsibility of the DIHS to arrange for this service with a network hospital/health care organization after the appropriate authorization is procured.

13.18. Preventive Maintenance. Preventive maintenance on all radiographic and associated equipment is necessary for the safety of patients and staff.

13.18.1. INS/DIHS owned equipment. When the equipment is owned by the INS/DIHS, the HSA is responsible for ensuring that all manufacturers' recommended preventive maintenance be performed according to schedule. The HSA will maintain a set of manufacturer's manuals on site.

13.18.2. Teleradiology Service Provider owned equipment. When the equipment is owned by a T-RSP and is installed in an INS SPC, the T-RSP is responsible for providing and funding all manufacturers' recommended preventive maintenance on the equipment. In this case, the HSA is the DIHS liaison that monitors maintenance schedules to ensure that all required maintenance is performed and a safe environment of care is maintained. If the T-RSP fails to provide the required maintenance on schedule, the HSA shall inform the DIHS Telehealth Coordinator who will, in turn, inform the contract officer. Documentation of preventive maintenance on all equipment that is installed within INS SPCs shall be provided to the HSA by the T-RSP.

13.19. Precious Metal Recovery Program. INS SPCs that currently store radiographic film are required to comply with the support agreement between the Department of Defense (DOD) and DOJ Number SC 4400-88154-804, May 1986. After three years, radiographic film shall be purged from the medical files. Scrap film shall be kept until sufficient quantities are available to warrant silver recovery by a local service. The HSA is responsible for arranging for silver recovery services.

13.20. Radiography Services in Contract Detention Facilities and Jails. Radiology services for detainees held in jails and contract detention facilities where DIHS does not directly provide medical services are provided by the organization that operates the medical services. Managed Care Coordinators shall authorize appropriate diagnostic services for detainees through the Medical Jail Management System. Chest x-rays for the purpose of detection of TB (or TB clearance for travel) require authorization.